AMENDMENTS TO THE CLAIMS:

Please amend claims 11 and 18 as follows:

Please add new claims 20-25.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Withdrawn)** A recombinant nucleic acid comprising a nucleotide sequence selected from the group consisting of the sequences outlined in Tables 1-50.

2. **(Withdrawn)** A host cell comprising the recombinant nucleic acid of claim 1.

3. **(Withdrawn)** An expression vector comprising the recombinant nucleic acid according to claim 2.

4. **(Withdrawn)** A host cell comprising the expression vector of claim 3.

5. **(Withdrawn)** A recombinant protein comprising an amino acid sequence encoded by a nucleic acid sequence comprising a sequence selected from the group consisting of the sequences outlined in Tables 1-50.

6. **(Withdrawn)** A method of screening drug candidates comprising: a) providing a cell that expresses a carcinoma associated (CA) gene comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50 or fragment thereof; b) adding a drug candidate to said cell; and c) determining the effect of said drug candidate on the expression of said CA gene.

7. **(Withdrawn)** A method according to claim 6 wherein said determining comprises comparing the level of expression in the absence of said drug candidate to the level of expression in the presence of said drug candidate.

8. **(Withdrawn)** A method of screening for a bioactive agent capable of binding to an CA protein (CAP), wherein said CAP is encoded by a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50, said method comprising: a) combining said CAP and a candidate bioactive agent; and b) determining the binding of said candidate agent to said CAP.

9. **(Withdrawn)** A method for screening for a bioactive agent capable of modulating the activity of an CA protein (CAP), wherein said CAP is encoded by a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50, said method comprising: a) combining said CAP and a candidate bioactive agent; and b) determining the effect of said candidate agent on the bioactivity of said CAP.

10. **(Withdrawn)** A method of evaluating the effect of a candidate carcinoma drug comprising: a) administering said drug to a patient; b) removing a cell sample from said patient; and c) determining alterations in the expression or activation of a gene comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50.

11. **(Currently amended)** A method of diagnosing ~~carcinoma~~ cancer comprising:

a) ~~determining the expression of one or more genes comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50, in~~ determining the level of an expression product comprising an nucleotide sequence having at least 95% sequence identity to SEQ ID NO: 174, or a complement thereof, in a sample comprising a first tissue type of a first individual; and

b) comparing ~~said expression of said gene(s) from~~ levels of the expression product in (a) to: (1) levels of the expression product in a second sample, said second sample comprising a second normal tissue type from said first individual, or (2) levels of the expression product in a third sample, said third sample comprising a normal tissue type from ~~or~~ a second unaffected individual; wherein ~~a difference in said expression indicates~~ an increase of at least 50% between the level of the expression products in (a) and the level of the expression products in the second sample or the third sample indicates that the first individual has ~~carcinoma~~ cancer.

12. **(Withdrawn)** A method for inhibiting the activity of a CA protein (CAP), wherein said CAP is encoded by a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50, said method comprising binding an inhibitor to said CAP.

13. **(Withdrawn)** A method of treating carcinomas comprising administering to a patient an inhibitor of an CA protein (CAP), wherein said CAP is encoded by a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50.

14. **(Withdrawn)** A method of neutralizing the effect of an CA protein (CAP), wherein said CAP is encoded by a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50, comprising contacting an agent specific for said CAP protein with said CAP protein in an amount sufficient to effect neutralization.

15. **(Withdrawn)** A polypeptide which specifically binds to a protein encoded by a nucleic acid comprising a nucleic acid selected from the group consisting of the sequences outlined in Tables 1-50.

16. **(Withdrawn)** A polypeptide according to claim 15 comprising an antibody which specifically binds to a protein encoded by a nucleic acid comprising a nucleic acid sequence selected from the group consisting of the sequences outlined in Tables 1-50.

17. **(Withdrawn)** A biochip comprising one or more nucleic acid segments selected from the group consisting of a nucleic acid of the sequences outlined in Tables 1-50 or fragments thereof.

18. **(Currently amended)** A method of diagnosing ~~carcinoma~~ cancer or a propensity to carcinoma by sequencing at least one expression product comprising a nucleotide sequence having at least 95% sequence identity to SEQ ID NO: 174 ~~CA gene of~~ in an individual.

19. **(Withdrawn)** A method of determining CA gene copy number comprising adding an CA gene probe to a sample of genomic DNA from an individual under conditions suitable for hybridization.

20. **(New)** The method of claim 11, wherein the nucleotide sequence has a sequence identity of at least about 98% with SEQ ID NO:174 or a complement thereof.

21. **(New)** The method of claim 11, wherein said nucleotide sequence comprises SEQ ID NO:174 or complement thereof.

22. **(New)** The method of claim 11 wherein the cancer is carcinoma or colon cancer.

23. **(New)** The method of claim 11, wherein the difference between the level of the expression products in (a) and the level of the expression products in the second or the third sample is at least 100%.

24. **(New)** The method of claim 11, wherein the difference between the level of the expression products in (a) and the level of the expression products in the second or the third sample is at least 150%.

25. **(New)** The method of claim 11, wherein the difference between the level of the expression products in (a) and the level of the expression products in the second or the third sample is at least 200%.